

based on the motion data, and directly places component polygons for said reference polygon based on the motion data without computing said articulating components.

REMARKS

By this Amendment, Applicants propose amending claims 17 and 19. No new matter is introduced. Claims 17-21, 24, 25, and 28 will remain pending upon entry of the claim amendments.

As a preliminary matter, in paragraph 3 of the Final Office Action, the Examiner indicates that the title of the application is "as originally filed." However, Applicants amended the title in the Amendment filed November 13, 2002. Since in paragraph 1 of the Final Office Action the Examiner acknowledges Applicants' November 13, 2002 Amendment, Applicants assume that Amendment has been entered, including the amended title. If Applicants' understanding is not correct, they request that the Examiner provide clarification.

In the Final Office Action dated January 29, 2003, the Examiner rejected claims 17-21, 24, 25, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Miyamoto et al. (U.S. Patent No. 6,241,610). Because the Examiner has not presented a *prima facie* case of obviousness, Applicants respectfully traverse the rejection and request reconsideration for the reasons presented below.

To establish a proper *prima facie* case of obviousness under 35 U.S.C. § 103(a), the Examiner must demonstrate each of three requirements. First, the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge

FINNEGAN
HENDERSON
FARABOW
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DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
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generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. See M.P.E.P. § 2143.01 (8th ed. 2001). Third, a reasonable expectation of success must exist. See M.P.E.P. § 2143.02 (8th ed. 2001). Moreover, each of these requirements must be found in the prior art, not in applicant's disclosure. See M.P.E.P. § 2143 (8th ed. 2001).

Miyamoto discloses a system for maintaining the number of polygons used to represent a face of a game character while decreasing the number of polygons that represent the remainder of the game character when the game character moves at high speeds. For example, if the game character is moving at a speed higher than a predetermined first level, then a check is made to determine whether the character is moving at a predetermined higher level of speed. If the game character is moving at the predetermined higher level of speed, then the game character (except for the character's face) is drawn with a reduced number of polygons. At the higher level of speed, the face is still drawn with the same number of polygons as it was drawn when the game character was moving at a slower speed. See col. 14, lines 32-47 and col. 14, line 61 - col. 15, line 2.

By contrast, Applicants' claim 17 recites a combination including, among other things, a processor that "computes the reference polygon at each of a plurality of trigger times corresponding to an occurrence of a predetermined event based on a position information of said reference polygon and the motion data, places the reference polygon in a three-dimensional space, and directly places said component polygons for said reference polygon . . . based on the position information of said reference polygon

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1300 I Street, NW
Washington, DC 20005
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without computing said articulating components.” Miyamoto does not teach or suggest at least these exemplary elements of claim 17.

As noted above, Miyamoto discloses using fewer polygons to represent the game character when the game character is moving at high speeds except that the number of polygons used to represent the game character’s face is still maintained at high speeds. Because Miyamoto does not disclose nor suggest at least the above exemplary features of claim 17, Miyamoto does not render obvious claim 17.

Additionally, in the Office Action, the Examiner alleges “[i]t is inherent that in Miyamoto et al. said face components could constitute reference polygons, body components could constitute said component polygons and said actual movement could constitute articulating components” (Final Office Action, page 3). However, Applicants respectfully submit such teachings are not inherent in Miyamoto. Contrary to the Examiner’s allegation, Miyamoto does not account for these features. Nor has the Examiner provided a proper citation to Miyamoto in support of this allegation.

Moreover, the Examiner admits “said actual movement could constitute articulating components,” which is an example of how Miyamoto teaches away from the present invention (Final Office, page 3). Applicants’ claim 17 recites a combination including, among other things, placing “said component polygons for said reference polygon . . . based on the position information of said reference polygon without computing said articulating components.” By contrast, the Examiner admits Miyamoto includes articulating components. Miyamoto thus teaches away from these exemplary features of claim 17.

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1300 I Street, NW
Washington, DC 20005
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Further, Miyamoto teaches determining an object display location within a three-dimensional space based on a movement amount of the object per each display frame. For example, the Examiner notes Miyamoto “determines the moving amount within one display frame” (Office Action, page 6). Accordingly, in Miyamoto, the determination of whether to place components is made based on the movement speed of the object. By contrast, Applicants’ claim 17 recites at least computing “the reference polygon at each of a plurality of trigger times corresponding to an occurrence of a predetermined event.” By contrast, in Miyamoto, the movement occurs for each display frame. Miyamoto thus does not disclose or suggest at least these exemplary features of Applicants’ claim 17.

In the Response to Arguments section of the Final Office Action, the Examiner alleges Miyamoto “discloses placing the object, or character in the three dimensional space as it is considered to be photographed based upon the moving amount determining circuit which determines the moving amount within one display frame, and thus would not compute articulating components by placing the character as a photograph, col. 2, lines 51-65” (page 6). However, this allegation fails to disclose or suggest at least the above exemplary features of claim 17.

Instead, the passage cited by the Examiner merely discloses positioning circuitry that determines the position of an object in three-dimensional space. See *also* col. 2, lines 66-67. The cited portion of Miyamoto thus involves determining an angle from which to view a game character relative to the three-dimensional game environment. This teaching therefore does not establish that Miyamoto discloses or suggests each and every element recited in claim 17.

Furthermore, there is no motivation found within Miyamoto to modify the reference to produce Applicants' claimed invention. Indeed, the Examiner's allegation that Miyamoto discloses "reducing the number of polygons in less noticeable areas" indicates Miyamoto teaches away from the present invention (Final Office Action, page 5). Such an allegation does not provide a motivation for modifying the disclosure found in Miyamoto to result in Applicants' claimed invention. Accordingly, without demonstrating a motivation to modify Miyamoto to arrive at Applicants' claimed invention, a *prima facie* case of obviousness has not been established.

Nor has the Examiner established a reasonable expectation of success that any modification made to Miyamoto would result in Applicants' claimed invention. As noted, a *prima facie* case of obviousness is not established without also demonstrating a reasonable expectation of success that is found in the prior art.

The Examiner should therefore withdraw the rejection of claim 17 under 35 U.S.C. § 103(a) for at least the above reasons.

Claim 19 includes recitations of a similar scope as claim 17. For at least the same reasons discussed above regarding allowable claim 17, Miyamoto does not disclose or suggest claim 19. Accordingly, the Examiner should withdraw the rejection of claim 19 under 35 U.S.C. § 103(a).

Finally, each of dependent claims 18, 20, 21, 24, 25, and 28 depend from allowable claims 17 and 19 and are at least allowable due to their dependency upon allowable base claims. Therefore, the Examiner should withdraw the rejection of claims 18, 20, 21, 24, 25, and 28 under 35 U.S.C. § 103(a).

FINNEGAN
HENDERSON
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GARRETT &
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1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
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Applicants respectfully request that the Examiner enter this Amendment under 37 C.F.R. § 1.116, placing claims 17-21, 24, 25, and 28 in condition for allowance. Applicants submit that the proposed amendments of claims 17 and 19 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner. Therefore, this Amendment should allow for immediate action by the Examiner.

In view of the foregoing remarks, Applicants submit that their claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of this application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: April 29, 2003

By: Anthony J. Handberg Reg. No. 53,232
for Richard V. Burgujian
Reg. No. 31,744

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com



APPENDIX TO AMENDMENT OF APRIL 29, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

AMENDMENTS TO THE CLAIMS

17. (Three Times Amended) A data processing apparatus for positioning a game character on a display, said apparatus comprising:

a game character model, including a reference polygon and component polygons, wherein no articulating components are included between said reference polygon and said component polygons;

a motion data table for storing motion data for executing a movement of the game character model, wherein motion data includes distance data and angle data; and

a processor, wherein the processor computes the reference polygon at each of a plurality of trigger times corresponding to an occurrence of a predetermined event based on a position information of said reference polygon and the motion data, places the reference polygon in a three-dimensional space, and directly places said component polygons for said reference polygon in the three-dimensional space based on the position information of said reference polygon without computing said articulating components.

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HENDERSON
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1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
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19. (Three Times Amended) A data processing apparatus for positioning a human game character on a display, said apparatus comprising:

a human game character model, including a reference polygon and component polygons, wherein no articulating components are included between said reference polygon and said component polygons,

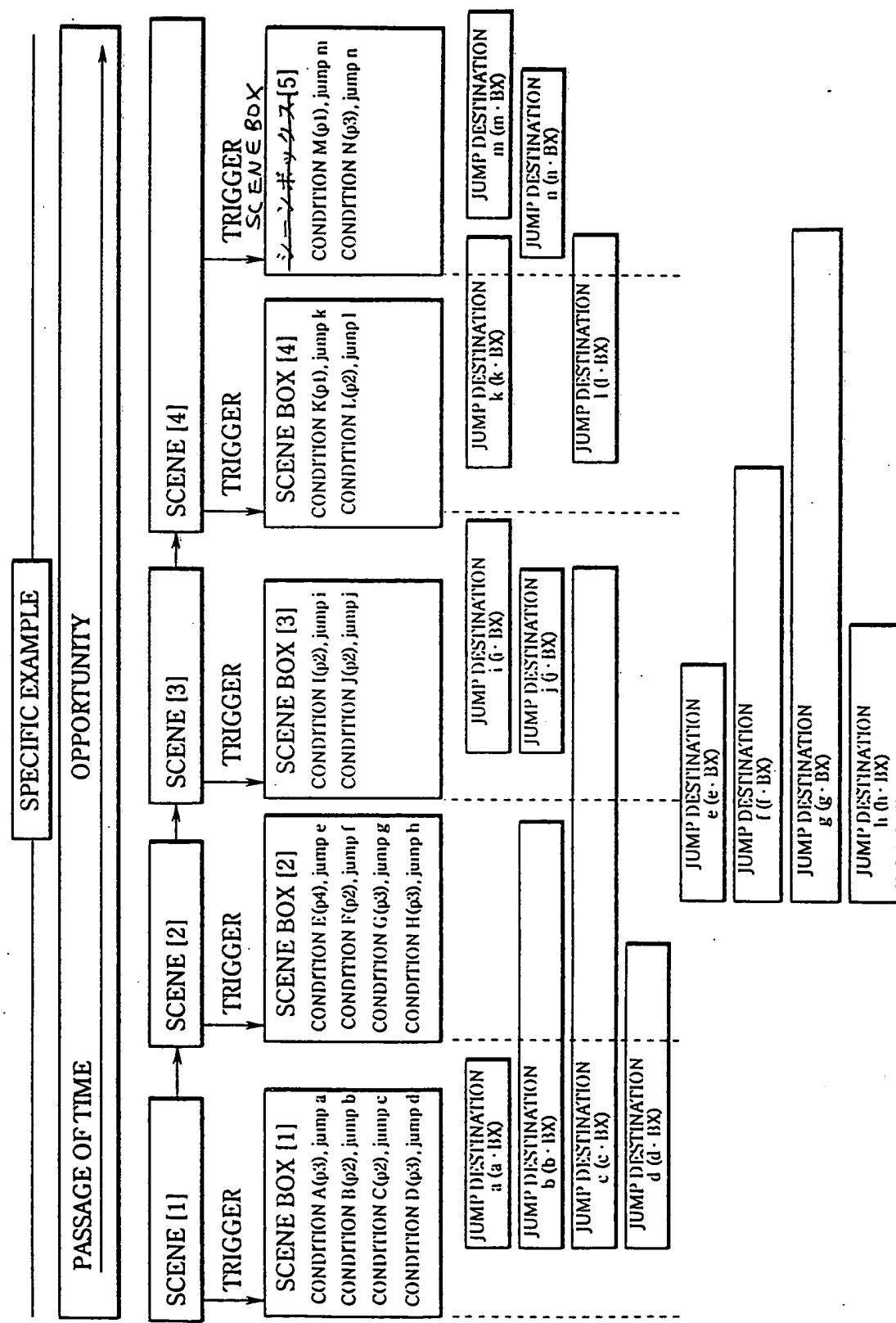
a motion data table for storing motion data for executing a motion for a movement of the human game character model, wherein motion data includes distance data and angle data; and

a processor, wherein the processor computes the reference polygon at each of a plurality of trigger times corresponding to an occurrence of a predetermined event based on the motion data, and directly places component polygons for said reference polygon based on the motion data without computing said articulating components.

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1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
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FIG.22



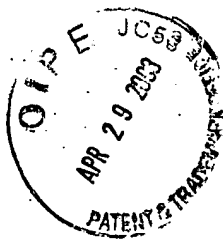


FIG.24

